

# Challenges in Making Therapeutic Lifestyle Changes among Hypercholesterolemic African-American Patients and Their Physicians

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**Financial support:** Funding for this project was provided from grants from the BlueCross BlueShield of Michigan Foundation and the U.S. Department of Health and Human Services HRSA Bureau of Health Professions (D12 HP00175). The authors have no conflict of interest.

**Objective:** We explored challenges faced by hypercholesterolemic African-American primary care patients and their physicians regarding therapeutic lifestyle changes (TLC) and provide patient-influenced recommendations to physicians.

**Methods:** In this qualitative study, 23 urban family medicine patients and their physicians (N=12) participated in separate focus groups, where they were asked semistructured, open-ended questions about knowledge and barriers to lifestyle treatment of high cholesterol.

**Results:** During the focus groups, barriers mentioned by physicians were: lack of time for TLC counseling, inadequate knowledge about counseling patients, and patient readiness and responsibility to change. Patient-revealed barriers included difficulty adhering to a diet/exercise regimen and a lack of knowledge about high cholesterol. Patients who were successful with adopting a healthy lifestyle identified personal experiences or those of family and friends as motivating.

**Conclusion:** Physicians desire training and resources to better help patients adopt diet and exercise regimens specific to their general and health literacy and their access to healthy foods, along with their readiness to change. Patients desire that physicians tailor their TLC advice to be specific to their context and they want help from physicians in setting realistic goals. Such a patient-centered counseling approach may improve adherence to lifestyle guidelines and, thus, clinical outcomes.

**Key words:** hypercholesterolemia ■ hyperlipidemia, African Americans ■ primary care ■ lifestyle

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## INTRODUCTION

The health disparities of African Americans are well known, yet solutions to improving cardiovascular risk factors remain elusive. In the United States, African Americans have a higher prevalence of obesity and physical inactivity than whites, as well as higher morbidity and mortality from coronary heart disease (CHD).<sup>1,2</sup> Hypercholesterolemia, a modifiable risk factor for CHD, may be treated with therapeutic lifestyle changes (TLC) and cholesterol-lowering drugs. An estimated 27% of all adult African Americans are candidates for dietary therapy, and 6% may require adjunctive pharmacological intervention to lower cholesterol.<sup>3,4</sup> However, the need for treatment may be substantially higher in urban patients. Foster and Jackson<sup>5</sup> reported that >47% of African-American patients in an inner-city clinic had untreated hypercholesterolemia.

Patients often want to avoid taking long-term lipid-lowering medications,<sup>6-8</sup> which supports the need for physicians to prescribe TLC for this silent condition. However, the Behavioral Risk Factor Surveillance System data indicate that less than half of obese patients report being advised to lose weight by healthcare professionals.<sup>9</sup> Physicians usually manage an average of three problems per patient visit<sup>10</sup> and often report that they do not have adequate time to address the reason for the visit,<sup>11</sup> and rarely can provide adequate counseling on TLC.<sup>12-14</sup>

Cross-sectional surveys of nonminority patients and physicians have explored barriers to making behavioral changes to improve cardiovascular disease or high cholesterol.<sup>15-19</sup> The generalizability of these studies to the attitudes, knowledge, behaviors and barriers of urban African-American primary care patients is not well established. Focus group studies have reported on minority patient perceptions about cardiovascular disease,<sup>20,21</sup> and ethnically effective methods for cholesterol education,<sup>22,23</sup> and physician perceptions about helping patients make TLCs,<sup>12,24</sup> yet these studies have not included the physicians who care for the patient respondents. In order to obtain a more comprehensive under-

standing of the challenges of effecting TLCs with African-American patients, we conducted a study using patient focus groups and focus groups of their family physicians.

## METHODS

### Participants

**Patients.** Using a database from the clinical laboratory that serves a urban midwestern family medicine center (FMC), 1,168 patients with a cholesterol test within the previous 12 months were identified to determine the following eligibility criteria for participation in the focus group discussion: 1)  $\geq 1$  total cholesterol laboratory result  $>200$  mg/dL, or 2) a high-density-lipoprotein level  $<40$  mg/dL, or 3) an established patient who visited the doctor in the past year. Six-hundred-seventy-seven patients met these criteria and 160 were randomly selected using SPSS software. The FMC physicians were asked to review this patient list to identify candidates for focus group discussions that were healthy enough to participate and likely to contribute to the discussion. Eighty-four patients were suggested for the study by their physicians and invited to participate with a mailed invitation that was signed by the FMC medical director; 28 patients responded with an interest in participating. The patients were given a choice of four dates; 23 attended one of these scheduled patient focus group discussions.

**Physicians.** Staff physicians and second- and third-year resident physicians who cared for patients at the FMC over the previous three years were asked to participate in separate focus groups. Thirteen were invited, and 12 attended.

**Table 1. Characteristics of physician and patient focus group participants**

<b>Physicians</b>		<b>(N=12)</b>
Gender		
Female	8	(66.6%)
Male	4	(33.3%)
Position		
Faculty	5	(41.7%)
Resident <sup>a</sup>	7	(58.3%)
<b>Patients</b>		<b>(N=23)</b>
Gender		
Female	13	(56.5%)
Male	10	(43.5%)
Age, <sup>b</sup> mean (range)	58	(40–77)
African American	23	(100%)
Health insurance <sup>c</sup>	23	(100%)
$\geq 1$ visit to PCP in past year	23	(100%)

a: second- and third-year residents; b: N=22; c: insurance: public (Medicaid, Medicare) and private; PCP: primary care physician

### Focus Group Training

The study team received five training sessions with experienced focus group trainers. Each session lasted 3–4 hours. This training included the purpose of focus groups, development of content, question design, moderator skills, and role playing as well as focus group planning, recruitment and implementation.

### Patient and Physician Focus Groups

Two physician and four patient focus groups were conducted. The groups were scheduled for two hours, with the first 30 minutes dedicated to introductions, orientation and a meal. All meetings were held at the FMC, and as a participation incentive patients received \$25 gift certificates from a local grocery store franchise. Participants were informed that the sessions would be audiotaped and assured of the anonymity of their responses. The study was approved by our university institutional review board.

The focus group questions (Tables 2–4) were developed by the authors with input from a focus group consultant. The questions were semistructured, using open-ended questions with probes to direct the conversation. The physician focus groups were held first, and discussions from that group helped us to formulate and refine the questions for the patient focus groups. Physicians and patients were asked similar questions about hypercholesterolemia knowledge and counseling, barriers to prescribing or adherence to cholesterol-lowering medications, and barriers to undertaking or prescribing TLC.

### Analysis

All of the focus groups were moderated by an African-American researcher, a physician with a background in family medicine (RD). A student research assistant (JM) assisted with the operation of the equipment and recording of nonverbal actions of the participants that indicated agreement or disagreement within the group. The discussions were recorded on two micro-cassette recorders to assure data integrity. The tapes were transcribed verbatim and the transcriptions checked against the tape for accuracy by JM and RD. All identifying names were removed from the transcripts and substituted with letter codes. Each transcript was read independently by three authors (KS, JB and RD). The data was analyzed using the framework approach,<sup>25</sup> in which the data was organized by themes framed by the research objectives and the respondents' answers to the questions. These themes were indexed, charted and mapped into emergent themes related to high cholesterol knowledge and TLC. The researchers met to compare themes from the transcripts; differences in choice of emergent themes among the researchers were reconciled through discussion until a consensus was reached.

## RESULTS

### Characteristics of the Group

The demographic characteristics of the physician and patient focus groups are summarized in Table 1. All patients visited their primary care physician  $\geq 1$  within the past year, with the majority visiting  $\geq 3$  times. Most had comorbidities, including hypertension and diabetes, and most were taking  $\geq 1$  long-term medication for a chronic condition. The patients, although not familiar with each other, seemed comfortable and appeared to enjoy themselves, with each contributing to the lively conversations generated by the questions. Although the research team was open to following any new conversation threads generated from the conversations, the group discussions remained centered on the questions in Tables 2–4.

### High Cholesterol Awareness, Treatment And Counseling

Focus group participants were asked questions related to awareness, treatment and counseling of hypercholesterolemia. Table 2 outlines patient and physician responses. Patients varied in their knowledge of cholesterol; some did not know the meaning of “cholesterol” or how to treat elevated levels. Others had good knowledge and mentioned the conventional treatments. At least one person in each focus group mentioned heart attack when describing a consequence of high cholesterol.

### Therapeutic Lifestyle Changes Counseling

**Physician advice on lifestyle changes.** Physicians were asked how they advised their patients about diet and exercise (Table 3). Strategies varied from providing diet sheets to using an ethnically sensitive approach. Most physicians described a patient-centered approach based on the rapport they had with the patient and patient readiness to change and responsibility for self-care, as suggested in the following comments:

- “I tell them to set measurable goals and to give yourself some time and credit for trying.”
- “I assess their level of readiness ... if they’re not ready, they’re not ready.”
- “You have to be ethnically correct. You have to take into consideration their background and modify their diet based on that, because it is hard for some people to follow just an American diet that is most probably contained in the brochures.”
- “Tell them when to eat, what not to eat, and sometimes ... if they have a computer, I tell them what sites to go on and print out the instructions.”
- “You have to ask them if they are ready to do it, because if they’re not ready, you’re just wasting your breath.”

**Patient recollection of lifestyle counseling.** Patients recalled physician advice to make lifestyle changes to improve their high cholesterol or another chronic condition, or more generally for weight loss, diet and exercise (Table 3).

- “My first doctor knew I had a cholesterol problem, and he was talking about diet and exercising, you know, what kind of food that you should eat, what kind of food that you shouldn’t eat, and the way you prepare your meals.”
- “I need better explanations on what to do about it, what to eat and what not to eat.”

### Therapeutic Lifestyle Changes: Barriers and Motivators

**Physician barriers.** Physicians were asked to describe barriers they faced in counseling their hypercholesterolemic patients about diet and exercise (Table 3). Physicians mentioned a lack of time, unrealistic guideline goals, inadequate physician knowledge about diet and exercise counseling, and patient factors as barriers.

- “Sometimes, we have patients for the first time who have too many problems and then we may choose to treat them one step at a time and not do all of them together. We may get to them [discussion of TLC] in a couple of months when we get their sugar to where it should be.”
- “Some [guidelines] might not seem realistic, where they’re telling you that the LDL [low-density-lipoprotein] for diabetic and cardiovascular patients has to be  $<100$ . Now if you get the average person on the street, it will be around 120.”
- “Knowing your patient is important. I (said to a patient) ‘Your bad cholesterol ...; and he said, ‘Is that my LDL?’ The patient was using all of these terminologies and I thought, ‘OK, I am dealing with a patient that has some knowledge of his condition.’”

**Physician perceptions of patient barriers.** Physicians discussed their perceptions of barriers that prevented patients from making lifestyle changes (Table 4). A lack of patient education, a lack of time and other deterrents to exercise were frequently mentioned.

- “Most patients have a job, three or five children, and they just don’t have the time.”
- “If you are the only one in the family trying to lose weight and your husband is sitting across from you eating a bag of chips—being in that situation is kind of difficult.”
- “And I also heard from a lot of patients who say that it is too cold outside and they cannot walk. So basically, they do much of the walking when it is spring and summer.”

- “You know, education is a big barrier. With people who are educated, our job is easier; they also understand better, so I think that the education level is something that needs to be fixed.”

**Patient barriers.** Patients discussed the barriers that they face with lifestyle changes (Table 3). Most barriers were related to cholesterol knowledge, deterrents to exercise, or the inability to adhere to a diet or exercise regimen.

- “You’re talking to a man 50 years old that has been doing this [eating certain foods] all his life. Now you going to tell me tomorrow to cut out and do none of this. So I tried it for a week, eating salad and tuna fish out of a can with nothing else with it. I almost died trying to do all of that stuff.”
- “But then, I had one doctor that finally went down and got it right. I understand, ‘If you eat two burgers; just eat one; don’t eat fries.’ Then that’s what I can deal with.”
- “If you have a physical job, you are exercising as you’re working. You’re not going to get off work and then go to the gym. I can’t see it.”
- “... but you know something, I still don’t understand what you do to get rid of high

cholesterol but take the pill. It has got to do with your weight, and I eat a lot of fried foods that ain’t cool.”

- “I have been working out at (the mall). Before my husband went back to work, we used to work out there about every other day, but now that he’s working, I can’t really do anything because, like I said, I have my child [with special needs] at home, so I am basically a homebody.”

**Patient motivators.** There were some patients who had success adhering to a diet change, such as gradually decreasing portions or reducing consumption of favorite, unhealthy foods. Usually those who were successful were highly motivated: their willingness to make TLC was influenced by personal experiences, actually seeing results, such as losing weight, or fear based on the problems or deaths of family members or close friends.

- “My exercise gives me more energy. When I come home, I clean the yard. And doing this, you know, it’s giving me energy rather than sitting home, you know, because I get tired sitting home.”
- “My brother’s heart attack—it was a couple of years ago now—and then another brother has been

**Table 2. High cholesterol awareness, treatment, and counseling**

#### Physicians

*How do you go about identifying patients with high cholesterol?*

- Patient
  - Age (>40 years)
  - Diagnoses
  - Race (African American)
  - Reason for visit
- Laboratory measurements as recommended by national guidelines (AHA, NCEP, ADA)

*How do you usually counsel a patient with newly diagnosed high cholesterol?*

- One-on-one discussion
- Educational materials (pre-printed pamphlets, web handouts, pharmaceutical companies, professional groups)
- Depends on age, educational level of patient
- Do little, because the patient already knows

#### Patients

*When you hear the words “high cholesterol” what comes to mind?*

- “Fatty substance”; clog
- Serum blood levels
- “Stroke”
- “Heart attack”
- Did not know

*Where did you get your cholesterol information?*

- Physician
- Family, friends
- Workplace
- Social or community groups (church, health fairs, retiree groups)
- TV commercials

*What are some ways of treating high cholesterol?*

- Modify diet (eliminate soda, eggs, fried foods, alcohol)
- Increase physical activity
- Medications
- Folk remedies (green tea, vinegar and honey)

*What has your physician told you about high cholesterol?*

- Provided a pamphlet
- Test results not explained
- Just told to start diet and exercise
- Never told about high cholesterol

AHA: American Heart Association; NCEP: National Cholesterol Education Program; ADA: American Diabetes Association

diagnosed with diabetes, so those things kind of keep me in line.”

## Recommendations to Increase Cholesterol Education

Patients and physicians were asked how to increase patients' knowledge of cholesterol prevention and treatment (Table 4). Both strongly recommended that cholesterol education begin at an early age. Physicians suggested that education should be formal with incentives to motivate the patient. Patients requested that their physician provide them with specific information on how to make TLC.

- “But it (recommendations of certain foods) changes every six months or so. You hear one thing is good

for you; the next time it's not. They said beef ain't good for you, then they say pork ain't good for you, and then water is no good for you—before you know it, you can't breathe fresh air!”

- “Say what really works, be specific—tell me what exercise will make it go down.”
- “Just tell me the truth, don't sugarcoat it.”
- “The doctor should tell you straight up, ‘This is going to happen to you if you don't do this or you don't do that.’ This is how it's going to have to be.”

## DISCUSSION

### Cholesterol Knowledge Barrier

One of the most frequently mentioned patient barriers to following TLC recommendation was lack of cho-

**Table 3. Lifestyle modifications advice, barriers, and motivators**

#### Physicians

*How do you promote a healthy lifestyle to your patients/How do you encourage a patient who is not seeing results?*

- Style
  - Standard: Guidelines, calorie sheets, diet logs
  - Direct: “No eating after 6 pm”
  - Personal: Sharing personal experiences
  - Encouragement; Compliments: “Weight loss is gradual” “Keep up the good work”
  - Ethnically sensitive: limit familiar foods
- Influences
- Rapport with patient
- Patient readiness and responsibility
- Patient compliance with recommendations
- Patient ethnicity

*Barriers physicians described*

- Lack of time to educate or treat patients
- Inability to meet unrealistic guideline goals
- Need for increased physician knowledge of effective counseling methods
- Patient factors:
  - Ready to make changes
  - More educated
  - Older in age

*What are some patient barriers to lifestyle changes?*

- Lack of education
- Deterrents to exercise
  - Lack of time
  - Lack of family support
  - Lack of motivation
  - Physical impairment
  - Poor weather deters outside activities
  - Higher cost of healthy food
  - Lack of convenient access to healthy food

#### Patients

*Did your physician suggest losing weight first before suggestion a CLM?*

- Advised to begin diet and exercise
- Diet and exercise advice for other chronic diseases (HTN, DM), not high cholesterol
- Physicians not specific about weight loss techniques

*What has worked for you? (Motivators)*

- Past diet and exercise success
- Seeing results
- Personal experiences (life or death situations)
- Experiences or deaths of other family members or close friends

*How have you changed your diet and physical activity? (Barriers)*

- Noncompliance with a diet/exercise regimen
- Hard to resist temptation
- Feelings of deprivation when dieting
- Lack of diet and exercise knowledge
- Lack of motivation
- No perceived immediate benefit
- Physical impairment
- Manual labor job
- Poor weather deters outside activities
- Family obligations first priority
- Lack of cholesterol knowledge
- No clear advice from physician
- Poor resources

HTN: hypertension; DM: diabetes mellitus

lesterol knowledge. Both physicians and patients expressed a need for the patient to better understand elevated cholesterol, its effects on the body and how best to treat it. Other studies of patient knowledge report a similar need.<sup>8,16,18</sup> Ayanian<sup>18</sup> reported that only 42.5% of respondents knew their cholesterol level, and this knowledge was significantly less common among those who were less educated or less affluent, African American, smokers, or who had diabetes or peripheral vascular disease. Our physicians said that if patients were more knowledgeable about hypercholesterolemia, they might participate more actively in their healthcare and be more likely to comply with TLC recommendations. Although cholesterol knowledge alone is not sufficient to improve CVD outcomes for most patients, knowledge about the link between lifestyle and disease may be necessary for patients to make TLC behavior changes.<sup>26</sup> Discussions from the physician in "layman's terms" about high cholesterol may help educate their patients and change some misconceptions about its origin, long-term consequences and treatment.

Although assessment of health literacy was not a focus of this study, lack of cholesterol knowledge may be related to both limited literacy skills and/or low health literacy. Forty-seven percent of people aged  $\geq 16$  years living in Detroit (the community of our patient participants) are estimated at literacy level 1,<sup>27</sup> characterized as having difficulty using certain reading, writing and computational skills necessary for functioning in everyday life. Ninety million people, half of all American adults, are estimated to have low health literacy, which is the degree to which individuals can obtain, process and understand basic health information and services they need to make appropriate health decisions.<sup>28,29</sup> People with limited literacy skills and low health literacy tend to be less physically and psychologically healthy, often underestimate their own health sta-

tus and frequently are less compliant.<sup>30-32</sup> To compound the problem, many educational materials are too advanced for the average patient.<sup>33,34</sup> Physicians are therefore encouraged to assess their patients' general and health literacy so that future counseling and treatment can be more productive. Instruments such as the Rapid Estimate of Adult Literacy in Medicine test<sup>35</sup> and the Medical Terminology Achievement Reading Test are nonthreatening assessments that can be used to identify patients with low reading levels. The Test of Functional Health Literacy in Adults<sup>36</sup> can also be used by physicians to assesses their patients' functional literacy as well as reading ability. Although these instruments may take up to 20 minutes to administer and score, there are shortened versions of these instruments, along with other literacy screening tests that take time constraints into consideration.<sup>37-40</sup>

Lack of knowledge about hypercholesterolemia also may be related to patient reports that they don't receive clear advice from their physicians or that they receive conflicting advice from other sources. Patients in our study often said that their high blood pressure or diabetes—not high cholesterol—was mentioned by their physician as a reason to make lifestyle changes. Perhaps if physicians emphasized the importance of lowering cholesterol along with maintaining a normal blood pressure and healthy weight to prevent cardiovascular disease, it would help patients to understand the "big picture" that a healthy lifestyle is key to improving their overall health.

Patients want more help from their primary care physicians about dietary advice, setting realistic goals and exercise recommendations.<sup>41</sup> Many African-American women report that they have never been encouraged by a health professional to be active, only to lose weight.<sup>42</sup> Our patients reported confusion about the best diet to help lower cholesterol and were unsure about the

**Table 4. Cholesterol education recommendations**

**Physicians: What are some suggestions that will aid you in treating your patients with high cholesterol?**

- |  |  |
|--|--|
| <ul style="list-style-type: none"> <li>• Establish good rapport</li> <li>• Learn what gets the patient excited</li> <li>• Educate patients at their own level</li> <li>• Provide patients insight to their disease</li> <li>• Make practical, simple suggestions</li> <li>• Use scare tactics if it works</li> </ul> | <ul style="list-style-type: none"> <li>• Increased cholesterol education for patients and physicians</li> <li>• Start patient education in grade school</li> <li>• Nonbiased sources of cholesterol information</li> <li>• Education should be formal with incentives to motivate the patient</li> </ul> |
|--|--|

**Patients: What advice would you give to a doctor who wants to tell his patients about high cholesterol?**

- |  |   |
|--|---|
| <ul style="list-style-type: none"> <li>• Physicians should provide detailed and specific explanations</li> <li>• Physicians should provide all information, whether negative or positive</li> <li>• Physicians should provide more literature</li> <li>• Patients should ask the physician more questions</li> </ul> | <ul style="list-style-type: none"> <li>• Less confusing material from the media</li> <li>• Community education should come from the church, health fairs, or jobs</li> <li>• Group discussions are a good resource to learn from other's experiences</li> </ul> |
|--|---|

most desirable fish to eat or recommendations for the number of eggs to eat. Perhaps reliable resources suggested by the physician would be beneficial.

## Lifestyle Modification Barriers

Patients frequently mentioned the difficulty of making TLC because of a lack of knowledge about diet and exercise, physical impairments, lack of time and motivation, and various family influences;<sup>8</sup> these findings are similar to other reports in the literature.<sup>43,44</sup> In another qualitative study of African-American women, 44 nonexercisers viewed themselves as at an ideal weight and cited similar barriers to exercises as we report. They also had a different definition of being healthy compared to exercisers and held the belief that it took up to two years of exercise to reap health benefits.

Family influences can serve as an exercise motivator for some and a barrier to others. In our study, some patients reported having friends and family who motivated them to exercise. Similar to the findings of Mosca et al.,<sup>8</sup> others mentioned taking care of ill family members, which left little time to focus on their own health problems.

Forty-two percent of the patients in our study were men, who reported similar barriers as the women, but expressed these more simply. They either chose to modify their lifestyles or not, differing from the women who discussed the many nuances of on-again, off-again diet and exercise goals. The men expressed a lack of time for physical activity because of work and a lack of knowledge about the benefits of changing diet and exercise habits. They reported receiving no clear advice about diet and exercise from physicians. Their motivation seemed to be directly influenced by the immediate consequences of their own life-threatening illnesses or the experiences of family and friends, similar to other reports.<sup>45</sup> Lack of time due to work demands is frequently mentioned by people with blue collar jobs, shift work or physically demanding jobs.<sup>46</sup>

The difficulty of following a healthy diet was a major theme during the focus group discussions. Physicians discussed the high cost and low availability of healthy foods as major barriers to patients, although the only barrier discussed by patients was the lack of motivation to follow a healthy diet. In the local neighborhood surrounding the FMC, there are very few stores selling fresh produce, in contrast to the many inexpensive fast-food restaurants, liquor stores and convenience food shops, typical of other urban areas.<sup>47,48</sup> These findings support the epidemiologic data that CHD incidence is higher in disadvantaged neighborhoods.<sup>49</sup>

Our physicians described the limited time to evaluate and educate a patient about high cholesterol; others have reported this as well.<sup>50,51</sup> Physicians usually manage an average of three problems per patient visit,<sup>10</sup> and often report that they do not have adequate time to

address the reason for the visit<sup>11</sup> and rarely can provide adequate counseling on TLC.<sup>12-14</sup>

Physician attitudes, behaviors and lack of confidence about lifestyle counseling were also barriers to diet and exercise counseling. The physicians in our focus groups stated a desire for more knowledge about diet and physical activity counseling.<sup>52,53</sup> Action plan counseling may be a useful strategy for physicians to help patients develop small goals for behavior change.<sup>54-56</sup> In addition, various reviews,<sup>57</sup> guidelines<sup>58</sup> and online resources from professional organizations<sup>59</sup> may help physicians with patient health education counseling skills.

## Cholesterol Education Recommendations

Most of the patients in our study visited their doctor  $\geq 3$  times per year, yet some were unfamiliar with hypercholesterolemia (which they all had) and its treatment. Patients reported that they often rely on community-based sources for cholesterol knowledge, the evidence-base of which is not known. Patients may not feel empowered to broadly discuss health issues with their physicians, and they may obtain incorrect information from other resources. Both physicians and patients advocated for patient cholesterol education that came from nonbiased sources and was provided in community settings.

Some of our physicians desired more training in behavioral and counseling strategies to help patients make TLCs. Patients are eager to be counseled about specific, effective methods to help with diet and physical activity, yet physicians should consider their patients' ethnicity as well as degree of general and health literacy when providing lifestyle counseling. One patient was helped by physician advice to decrease portions of familiar foods, rather than avoiding these and starting a diet of unfamiliar foods and recipes. Perhaps collaborative goal setting with their physician can help patients achieve TLC.<sup>55</sup>

Using patient education materials designed at a low reading level may also aid in patient education. Our patients expressed an interest in participating in more focus groups, or group-like discussions. Group visits,<sup>60,61</sup> which may be an appropriate and inexpensive alternative to the traditional office visit, are a powerful way for patients to be positively influenced by the strategies of other patients coping with the same condition.<sup>62</sup>

## Strengths and Limitations

One strength of this study was its sample of urban African-American patients with documented high serum cholesterol. We conducted four patient focus groups and believe saturation was achieved, as the group discussions yielded similar information. Another strength was the inclusion of the physicians who provide healthcare for these patients. Including perspectives from both patients and their physicians provides useful information about



doctor-patient communication, as well as perspectives about implementing lifestyle changes. A possible limitation to the study findings is that participants were drawn from one practice site, and the patients may not be representative of all African-American patients seen by family physicians. Nevertheless, these patients demonstrated a wide range of knowledge, attitudes and behaviors toward nonpharmacological treatment of high cholesterol and expressed similar barriers to lifestyle modifications as other nonminority patient populations. Also, there was a large variation in patient focus group size (2–11 patients), which may have affected the ability to participate in answer sharing in the largest group. However, all patients provided some answers to the questions presented, especially when specifically prompted. Lastly, the physician focus groups were conducted by researchers known to the physicians. This could have inhibited their audiotaped conversations; however, there was no indication that this was a concern, with lively discussions in each focus group.

## CONCLUSION

Our study objective was to better understand the difficulties faced by African-American patients and their physicians when using TLC to treat hypercholesterolemia. The barriers to using TLC to lower cholesterol most frequently mentioned by physicians were: inadequate knowledge about how best to counsel patients to achieve behavior changes, the inadequate amount of time during the patient visit, and patient readiness and responsibility for self-care. Patients often said they had not received clear physician advice about how to be successful in making TLCs. Patients were frank about their own inability to stick to a diet or exercise regimen. Both patients and physicians suggested more public education about high cholesterol.

Our findings were similar to those of other studies that reported on nonminority patient attitudes and barriers.<sup>15–19</sup> Although it is important to know that urban hypercholesterolemic African-American patients have similar attitudes, beliefs and barriers with lifestyle changes as other demographic groups, the findings from our study do not suggest how these may influence the health disparities in cardiovascular risk experienced by African Americans.

Physicians sensitive to cultural variations in diet and lifestyle may be more effective with TLC counseling to improve diet and physical activity. Considering patients' general and health literacy, ethnicity and culture, access to healthy foods, and readiness to change can help personalize lifestyle counseling. Patients seemed to enjoy the focus group atmosphere, and several indicated an interest in participating in further group discussions, suggesting the potential benefit of group visits for patients attempting lifestyle changes.

## ACKNOWLEDGEMENTS

The researchers thank Patrick Bridge, PhD, Tana Bridge, and SPEC Associates Inc. for providing training in the conduct and analysis of the focus groups.

## REFERENCES

1. Thom T, Haase N, Rosamond W, et al. Heart disease and stroke statistics—2006 update: a report from the American Heart Association Statistics Committee and Stroke Statistics Subcommittee. *Circulation*. 2006;113(6):e85–151.
2. Crespo CJ, Smit E, Andersen RE, et al. Race/ethnicity, social class and their relation to physical inactivity during leisure time: results from the Third National Health and Nutrition Examination Survey, 1988–1994. *Am J Prev Med*. 2000;18(1):46–53.
3. Sempos CT, Cleeman JI, Carroll MD, et al. Prevalence of high blood cholesterol among US adults. An update based on guidelines from the second report of the National Cholesterol Education Program Adult Treatment Panel. *JAMA*. 1993;269(23):3009–3014.
4. Fong RL, Ward HJ. The efficacy of lovastatin in lowering cholesterol in African Americans with primary hypercholesterolemia. *Am J Med*. 1997;102(4):387–391.
5. Foster P, Jackson M. Distribution of lipoprotein phenotypes, cholesterol, and lipids in inner-city blacks. *J Natl Med Assoc*. 1993;85(3):211–215.
6. Ellis JJ, Erickson SR, Stevenson JG, et al. Suboptimal statin adherence and discontinuation in primary and secondary prevention populations. *J Gen Intern Med*. 2004;19(6):638–645.
7. Avorn J, Monette J, Lacour A, et al. Persistence of use of lipid-lowering medications: a cross-national study. *JAMA*. 1998;279(18):1458–1462.
8. Mosca L, Mochari H, Christian A, et al. National study of women's awareness, preventive action, and barriers to cardiovascular health. *Circulation*. 2006;113(4):525–534.
9. Galuska DA, Will JC, Serdula MK, et al. Are health care professionals advising obese patients to lose weight? *JAMA*. 1999;282(16):1576–1578.
10. Beasley JW, Hankey TH, Erickson R, et al. How many problems do family physicians manage at each encounter? A WRN study. *Ann Fam Med*. 2004;2(5):405–410.
11. Trude S. So much to do, so little time: physician capacity constraints, 1997–2001: results from the community tracking study. *Track Rep*. 2003(8):1–4.
12. Makrides L, Veinot PL, Richard J, et al. Primary care physicians and coronary heart disease prevention: a practice model. *Patient Educ Couns*. 1997;32(3):207–217.
13. Beaudoin C, Lussier MT, Gagnon RJ, et al. Discussion of lifestyle-related issues in family practice during visits with general medical examination as the main reason for encounter: an exploratory study of content and determinants. *Patient Educ Couns*. 2001;45(4):275–284.
14. Flocke SA, Clark A, Schlessman K, et al. Exercise, diet, and weight loss advice in the family medicine outpatient setting. *Fam Med*. 2005;37(6):415–421.
15. Thomas J, Lackland D, Taylor K. Disparity between whites and african-americans in knowledge and treatment of cholesterol. Carolina heart survey. *Ann Epidemiol*. 2000;10(7):460.
16. Nash IS, Mosca L, Blumenthal RS, et al. Contemporary awareness and understanding of cholesterol as a risk factor: results of an American Heart Association national survey. *Arch Intern Med*. 2003;163(13):1597–1600.
17. Natarajan S, Lipsitz SR, Nietert PJ. Self-report of high cholesterol: determinants of validity in U.S. adults. *Am J Prev Med*. 2002;23(1):13–21.
18. Ayanian JZ, Landon BE, Landrum MB, et al. Use of cholesterol-lowering therapy and related beliefs among middle-aged adults after myocardial infarction. *J Gen Intern Med*. 2002;17(2):95–102.
19. Mosca L, Ferris A, Fabunmi R, et al. Tracking women's awareness of heart disease: an American Heart Association national study. *Circulation*. 2004;109(5):573–579.
20. Collins TC, Clark JA, Petersen LA, et al. Racial differences in how patients perceive physician communication regarding cardiac testing. *Med Care*. 2002;40(1 Suppl):i27–34.
21. Hyman DJ, Simons-Morton DG, Ho K, et al. Cholesterol-related knowledge, attitudes, and behaviors in a low-income, urban patient population. *Am J Prev Med*. 1993;9(5):282–289.



22. Covington JP, Grisso JA. Assessing cardiovascular disease risk in women: a cultural approach. *J Natl Med Assoc.* 2001;93(11):430-435.
23. Gettleman L, Winkleby MA. Using focus groups to develop a heart disease prevention program for ethnically diverse, low-income women. *J Community Health.* 2000;25(6):439-453.
24. Summerskill WS, Pope C. 'I saw the panic rise in her eyes, and evidence-based medicine went out of the door.' An exploratory qualitative study of the barriers to secondary prevention in the management of coronary heart disease. *Fam Pract.* 2002;19(6):605-610.
25. Pope C, Ziebland S, Mays N. Qualitative research in health care. Analysing qualitative data. *BMJ.* 2000;320(7227):114-116.
26. Dunn AL, Marcus BH, Kampert JB, et al. Reduction in cardiovascular disease risk factors: 6-month results from Project Active. *Prev Med.* 1997;26(6):883-892.
27. National Institute for Literacy. The State of Literacy in America: Synthetic estimates of adult literacy proficiency at the local, state, and national levels. [database]. [www.nifl.gov/readers/intro.htm](http://www.nifl.gov/readers/intro.htm). Accessed 06/27/05.
28. Berkman ND, DeWalt DA, Pignone MP, et al. Literacy and health outcomes. Summary, Evidence Report/Technology Assessment No. 87. Rockville, MD: Agency for Healthcare Research and Quality, 2004.
29. Institute of Medicine. Report brief. Health literacy: a prescription to end confusion. [www.iom.edu/report.asp?id=19723](http://www.iom.edu/report.asp?id=19723). Accessed 04/19/04.
30. Landers SJ. Low health literacy is pervasive barrier to care. Reports on patients' inability to understand health information point up the need for clear physician communication. [www.ama-assn.org/amednews/2004/04/26/hlsa0426.htm](http://www.ama-assn.org/amednews/2004/04/26/hlsa0426.htm). Accessed 04/19/04.
31. Lee PP. Why literacy matters. Links between reading ability and health. *Arch Ophthalmol.* 1999;117(1):100-103.
32. Gazmararian JA, Williams MV, Peel J, et al. Health literacy and knowledge of chronic disease. *Patient Educ Couns.* 2003;51(3):267-275.
33. Wallace LS, Lennon ES. American Academy of Family Physicians patient education materials: can patients read them? *Fam Med.* 2004;36(8):571-574.
34. Merritt SL, Gates MA, Skiba K. Readability levels of selected hypercholesterolemia patient education literature. *Heart Lung.* 1993;22(5):415-420.
35. Davis TC, Crouch MA, Long SW, et al. Rapid assessment of literacy levels of adult primary care patients. *Fam Med.* 1991;23(6):433-435.
36. Parker RM, Baker DW, Williams MV, et al. The test of functional health literacy in adults: a new instrument for measuring patients' literacy skills. *J Gen Intern Med.* 1995;10(10):537-541.
37. TenHave TR, Van Horn B, Kumanyika S, et al. Literacy assessment in a cardiovascular nutrition education setting. *Patient Educ Couns.* 1997;31(2):139-150.
38. Bass PF III, Wilson JF, Griffith CH. A shortened instrument for literacy screening. *J Gen Intern Med.* 2003;18(12):1036-1038.
39. Davis TC, Long SW, Jackson RH, et al. Rapid estimate of adult literacy in medicine: a shortened screening instrument. *Fam Med.* 1993;25(6):391-395.
40. Weiss BD, Mays MZ, Maritz W, et al. Quick assessment of literacy in primary care: the newest vital sign. *Ann Fam Med.* 2005;3(6):514-522.
41. Potter MB, Vu JD, Croughan-Minihane M. Weight management: what patients want from their primary care physicians. *J Fam Pract.* 2001;50(6):513-518.
42. Felton GM, Boyd MD, Bartoces MG, et al. Physical activity in young African American women. *Health Care Women Int.* 2002;23(8):905-918.
43. Schutzer KA, Graves BS. Barriers and motivations to exercise in older adults. *Prev Med.* 2004;39(5):1056-1061.
44. Walcott-McQuigg JA, Zerwic JJ, Dan A, et al. An ecological approach to physical activity in African American women. *Medscape Womens Health.* 2001;6(6):3.
45. Hankey CR, Leslie WS, Lean ME. Why lose weight? Reasons for seeking weight loss by overweight but otherwise healthy men. *Int J Obes Relat Metab Disord.* 2002;26(6):880-882.
46. Burton NW, Turrell G. Occupation, hours worked, and leisure-time physical activity. *Prev Med.* 2000;31(6):673-681.
47. Lee RE, Regan G, Booth KM, et al. Availability of healthful foods in stores in urban housing development neighborhoods. North American Association for the Study of Obesity's 2004 Annual Scientific Meeting 2004, Las Vegas, NV.
48. Reidpath DD, Burns C, Garrard J, Mahoney M, et al. An ecological study of the relationship between social and environmental determinants of obesity. *Health Place.* 2002;8(2):141-145.
49. Diez Roux AV, Merkin SS, Arnett D, et al. Neighborhood of residence and incidence of coronary heart disease. *N Engl J Med.* 2001;345(2):99-106.
50. Yarnall KS, Pollak KI, Ostbye T, et al. Primary care: is there enough time for prevention? *Am J Public Health.* 2003;93(4):635-641.
51. Kushner RF. Barriers to providing nutrition counseling by physicians: a survey of primary care practitioners. *Prev Med.* 1995;24(6):546-552.
52. Allen M, Mann K, Putnam W, et al. Prescribing exercise for cardiac patients: knowledge, practices, and needs of family physicians and specialists. *J Cardiopulm Rehabil.* 2000;20(6):333-339.
53. Mihalyuk TV, Knopp RH, Scott CS, et al. Physician informational needs in providing nutritional guidance to patients. *Fam Med.* 2004;36(10):722-726.
54. MacGregor K, Handley M, Wong S, et al. Behavior-change action plans in primary care: a feasibility study of clinicians. *J Am Board Fam Med.* 2006;19(3):215-223.
55. Handley M, MacGregor K, Schillinger D, et al. Using action plans to help primary care patients adopt healthy behaviors: a descriptive study. *J Am Board Fam Med.* 2006;19(3):224-231.
56. Lorig K. Action planning: a call to action. *J Am Board Fam Med.* 2006;19(3):324-325.
57. McInnis KJ, Franklin BA, Rippe JM. Counseling for physical activity in overweight and obese patients. *Am Fam Physician.* 2003;67(6):1249-1256.
58. NHLBI Obesity Education Initiative Expert Panel. The Practical Guide: Identification, evaluation, and treatment of overweight and obesity in adults: NIH Pub. No. 00-4084, 2000:78.
59. The North American Association for the Study of Obesity (NAASO). Obesity Online. [www.obesityonline.org/site/index.cfm](http://www.obesityonline.org/site/index.cfm). Accessed 07/13/05.
60. Masley S, Phillips S, Copeland JR. Group office visits change dietary habits of patients with coronary artery disease-the dietary intervention and evaluation trial (D.I.E.T.). *J Fam Pract.* 2001;50(3):235-239.
61. Jaber R, Braksmajer A, Trilling JS. Group visits: a qualitative review of current research. *J Am Board Fam Med.* 2006;19(3):276-290.
62. Pennachio DL. Should you offer group visit? *Med Econ.* 2003;80(15):70-72,82,85. ■

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